

2019  
MARCH OF DIMES  
REPORT CARD

This year, in addition to monitoring progress on key indicators, Report Cards include selected state actions to improve maternal and infant health. Premature birth and its complications are the largest contributors to infant death in the U.S., and preterm birth rates have been increasing for four years. Prematurity grades are assigned by comparing the 2018 preterm birth rate to March of Dimes' goal of 8.1 percent by 2020. While it's not yet possible to assign grades for maternal health indicators given the available data, it's clear that rates of maternal death and morbidity are unacceptably high. Maternal health complications, and the social determinants of health, affect the health and survival of both mom and baby. Highlighted on the second page are selected actions available to states to help improve maternal and infant health.

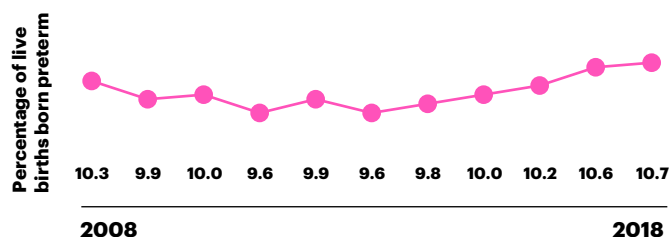
## MISSOURI

PREMATURITY  
GRADE

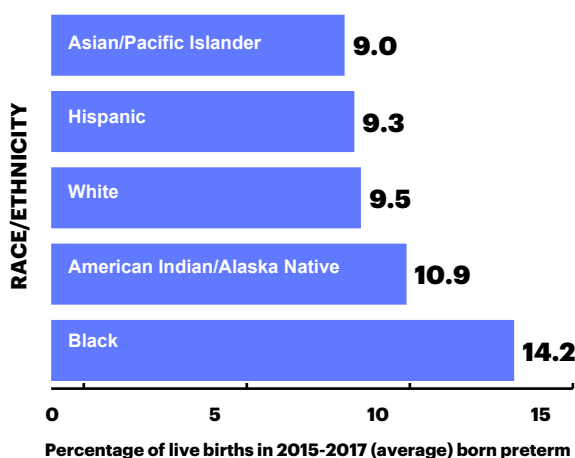
D+

PRETERM  
BIRTH RATE

10.7%

PRETERM BIRTH  
RATE BY RACE  
AND ETHNICITY

The March of Dimes disparity ratio measures and tracks progress towards the elimination of racial/ethnic disparities in preterm birth. It's based on Healthy People 2020 methodology and compares the group with the lowest preterm birth rate to the average for all other groups. Progress is evaluated by comparing the current disparity ratio to a baseline disparity ratio. A lower disparity ratio is better, with a disparity ratio of 1 indicating no disparity.



*In Missouri, the preterm birth rate among black women is 49% higher than the rate among all other women.*

DISPARITY RATIO:

1.23

CHANGE FROM BASELINE:  
No Improvement

## PRETERM BIRTH RATES BY COUNTIES AND CITY

COUNTY	GRADE	PRETERM BIRTH RATE	CHANGE IN RATE FROM LAST YEAR
Clay	B+	8.5%	Improved
Greene	C-	10.2%	Worsened
Jackson	D+	10.6%	Worsened
St. Charles	C	9.9%	Improved
St. Louis	D-	11.2%	Improved
St. Louis (city)	F	13.7%	Worsened

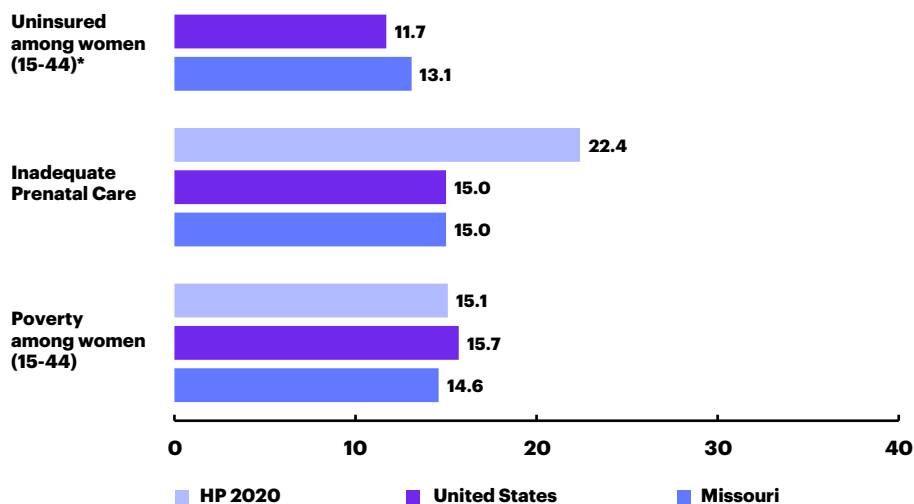
  

CITY	GRADE	PRETERM BIRTH RATE	CHANGE IN RATE FROM LAST YEAR
Kansas City	D+	10.7%	Improved

# MISSOURI MATERNAL AND INFANT HEALTH: CONTEXT AND ACTIONS

## SELECTED SOCIAL DETERMINANTS OF HEALTH

Our unequal society has negative consequences for health. Factors such as these are linked to adverse maternal and infant health outcomes overall. Many other structural factors and inequities influence the health of mothers and babies, especially for Black, American Indian and Alaska Native women. For example, income, health insurance status and prenatal care access are traditionally considered protective factors, but if they are held constant, racial and ethnic disparities persist. March of Dimes is collaborating with others to confront social and structural determinants of health, while identifying solutions that help alleviate the negative impacts of such inequities.



\*The Healthy People 2020 goal is for all women (15-44) to be insured.

**\$59  
THOUSAND**

## AVERAGE COST OF A PRETERM BIRTH

The estimated societal cost per preterm birth includes medical care for premature children, maternal delivery costs, early intervention services, special education services and lost productivity. State estimates reflect 2016 adjustments to underlying national estimates developed in 2005 (see technical notes for additional details). Adjustments per state include birth and infant mortality rate and incidence by gestational age, service bundle composition and costs and cost inflation.

**\$12.19  
MILLION**

## MATERNAL AND CHILD HEALTH BLOCK GRANT

The Maternal and Child Health (MCH) Block Grant is one source of federal support for states to improve the health of moms and children. States have some flexibility in allocating funds, which can be used to increase access to quality health care for pregnant women. State MCH block grant amounts provide an example of the limited amount of available funds in comparison to the costs of prematurity and other complications.

**NOT ADOPTED**

## MEDICAID EXPANSION

Medicaid expansion to cover individuals up to 138% of the federal poverty level can play an essential role in improving maternal and infant health. A growing number of studies indicate that Medicaid expansion has reduced the rate of women of childbearing age who are uninsured, improved health outcomes and helped to reduce disparities, including lower rates of premature birth and low birthweight for Black infants in expansion states.

## OTHER RECOMMENDED STATE ACTIONS

March of Dimes recommends **key policy actions** to improve maternal and infant health in all states. Future Report Cards will assess these actions at the state level.

- **COMPREHENSIVE MEDICAID COVERAGE EXTENSION FOR ALL WOMEN TO AT LEAST ONE YEAR POSTPARTUM** In too many states, Medicaid maternity coverage ends 60 days after giving birth, ending access to care at a time when risks of maternal complications and death persist.
- **GROUP PRENATAL CARE ENHANCED REIMBURSEMENT** Group prenatal care has shown significant benefits to maternal health, increases healthy behaviors and reduces adverse birth outcomes. Increased benefits were seen in Black women who participated in group prenatal care. Enhanced reimbursement models, including delivery and outcomes-based incentives, can encourage providers to offer it.
- **MATERNAL MORTALITY REVIEW COMMITTEES** Establishment, funding and reporting of state data to CDC through Maternal Mortality Review Committees is essential to understanding and addressing the causes of maternal death.

**MORE INFORMATION** [MARCHOFDIMES.ORG/REPORTCARD](https://www.marchofdimes.org/reportcard)

For details on data sources and calculations, see Technical Notes. For more information on how we are working to reduce premature birth, visit [www.marchofdimes.org](https://www.marchofdimes.org).

# 2019 MARCH OF DIMES REPORT CARD

## TECHNICAL NOTES

### PREMATURE BIRTH: DEFINITION AND SOURCE

Premature or preterm birth is a birth with less than 37 weeks gestation based on the obstetric estimate of gestational age. Data used in this report card came from the National Center for Health Statistics (NCHS) natality files, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program.<sup>1</sup> This national data source was used so that data are comparable for each state and jurisdiction-specific report card. Data provided on the report card may differ from data obtained directly from state or local health departments and vital statistics agencies due to timing of data submission and handling of missing data. The preterm birth rates shown at the top of report card was calculated from the NCHS 2018 final natality data. Preterm birth rates in the trend graph are from the NCHS 2008-2018 final natality data. County preterm birth rates are from the NCHS 2017 final natality data. Preterm birth rates for bridged racial and ethnic categories were calculated from NCHS 2015-2017 final natality data. Preterm birth rates were calculated as the number of premature births divided by the number of live births with known gestational age multiplied by 100.

### GRADING METHODOLOGY

Expanded grade ranges were introduced in 2019. Grade ranges remain based on standard deviations of final 2014 state and District of Columbia preterm birth rates away from the March of Dimes goal of 8.1 percent by 2020. Grades were determined using the following scoring formula: (preterm birth rate of each jurisdiction – 8.1 percent) / standard deviation of final 2014 state and District of Columbia preterm birth rates. Each score within a grade was divided into thirds to create +/- intervals. The resulting scores were rounded to one decimal place and assigned a grade. See the table for details.

### PREMATURE BIRTH BY COUNTY

Report cards for states and jurisdictions, except District of Columbia, display up to 6 counties with the greatest number of live births. Counties are not displayed if the number of premature births is less than 20. Counties are ordered alphabetically. Grades were assigned based on the grading criteria described above. Change from previous year was calculated by comparing the 2017 county preterm birth rate to the 2016 rate.

### PREMATURE BIRTH BY CITY

Report cards for states and jurisdictions, except District of Columbia, display the city with the greatest number of live births. Cities are not displayed for Connecticut, Delaware, Maine, Vermont, West Virginia and Wyoming due to limited availability of data. Grades were assigned based on the grading criteria described above. Change from previous year was calculated by comparing the 2017 city preterm birth rate to the 2016 rate.

### PREMATURE BIRTH BY RACE/ETHNICITY OF THE MOTHER

Mother's race and Hispanic ethnicity are reported separately on birth certificates. Rates for Hispanic women include all bridged racial categories (white, black, American Indian/Alaska Native and Asian/Pacific Islander). Rates for non-Hispanic women are classified according to race. The Asian/Pacific Islander category includes Native Hawaiian. To provide stable rates, racial and ethnic groups are shown on the report card if the group had 20 or more premature births in each year from 2015-2017. To calculate preterm birth rates on the report card, three years of data were aggregated (2015-2017). Preterm birth rates for not stated/unknown race are not shown on the report card.

### PREMATURE BIRTH DISPARITY MEASURES

The March of Dimes disparity ratio is based on Healthy People 2020 methodology and provides a measure of the differences, or disparities, in preterm birth rates across racial/ethnic groups within a geographic area.<sup>2</sup> The disparity ratio compares the racial/ethnic group with the lowest preterm birth rate (comparison group) to the average of the preterm birth rate for all other groups.

To calculate the disparity ratio, the 2015-2017 preterm birth rates for all groups (excluding the comparison group) were averaged and divided by the 2015-2017 comparison group preterm birth rate. The comparison group is the racial/ethnic group with the lowest six-year aggregate preterm birth rate (2010-2015) among groups that had 20 or more premature births in each year from 2010-2015. A disparity ratio was calculated for U.S. states, the District of Columbia and the total U.S. A disparity ratio was not calculated for Maine, Puerto Rico, Vermont and West Virginia due to limited availability of data. A lower disparity ratio is better, with a disparity ratio of 1 indicating no disparity.

GRADE	PRETERM BIRTH RATE RANGE SCORING CRITERIA
<b>A</b>	Preterm birth rate less than or equal to 7.7 percent
<b>A-</b>	Preterm birth rate of 7.8 percent to 8.1 percent
<b>B+</b>	Preterm birth rate of 8.2 percent to 8.5 percent
<b>B</b>	Preterm birth rate of 8.6 percent to 8.9 percent
<b>B-</b>	Preterm birth rate of 9.0 percent to 9.2 percent
<b>C+</b>	Preterm birth rate of 9.3 percent to 9.6 percent
<b>C</b>	Preterm birth rate of 9.7 percent to 10.0 percent
<b>C-</b>	Preterm birth rate of 10.1 percent to 10.3 percent
<b>D+</b>	Preterm birth rate of 10.4 percent to 10.7 percent
<b>D</b>	Preterm birth rate of 10.8 percent to 11.1 percent
<b>D-</b>	Preterm birth rate of 11.2 percent to 11.4 percent
<b>F</b>	Preterm birth rate greater than or equal to 11.5 percent

# 2019 MARCH OF DIMES REPORT CARD

## TECHNICAL NOTES

### PREMATURE BIRTH DISPARITY MEASURES

Progress toward eliminating racial and ethnic disparities was evaluated by comparing the 2015-2017 disparity ratio to a baseline (2010-2012) disparity ratio. Change between time periods was assessed for statistical significance at the 0.05 level using the approach recommended by Healthy People 2020.<sup>2</sup> If the disparity ratio significantly improved because the average preterm birth rate for all other groups got better, we displayed "Improved" on the report card. If the disparity ratio significantly worsened because the lowest group got better or the average of all other groups got worse, we displayed "Worsened" on the report card. If the disparity ratio did not significantly change, we displayed "No Improvement" on the report card.

The report card also provides the percent difference between the racial/ethnic group with the 2015-2017 highest preterm birth rate compared to the combined 2015-2017 preterm birth rate among women in all other racial/ethnic groups. This percent difference was calculated using only the racial/ethnic groups displayed on the state or jurisdiction-specific report card. This difference was calculated for each U.S. state with adequate numbers and the District of Columbia.

### SELECTED SOCIAL DETERMINANTS OF HEALTH

March of Dimes recognizes the importance of certain risk factors that are associated with premature birth. Three of these contributing factors are highlighted for each state. These risk factors are poverty in women (age 15-44 years), lack of health insurance in women (15-44 years) and inadequacy of prenatal care.

A woman was considered uninsured if she was not covered by any type of health insurance.<sup>3</sup> The uninsured percent is calculated among women ages 15-44. Persons in poverty are defined as those who make less than 100% of the poverty threshold established by the US Census Bureau.<sup>4</sup> The Federal poverty threshold for a family of three was \$19,749 in 2017. Poverty is reported for women 15-44 years. Adequacy of prenatal care is measured using the Adequacy of Prenatal Care Utilization Index, which classifies prenatal care received into 1 of 4 categories (inadequate, intermediate, adequate and adequate plus) by combining information about the timing of prenatal care, the number of visits and the infant's gestational age.<sup>5</sup>

### FINANCIAL AND ECONOMIC INDICATORS

Estimates of the national societal economic burden of preterm birth in 2005 generated for the Institute of Medicine's (IOM) report<sup>6</sup>, Preterm Birth: Causes, Consequences and Prevention served as the foundation for updating costs to 2016 and for providing separate estimates for each state and the District of Columbia (see [https://marchofdimes.org/peristats/documents/Cost\\_of\\_Prematurity\\_2019.pdf](https://marchofdimes.org/peristats/documents/Cost_of_Prematurity_2019.pdf) for details)<sup>7</sup>. Costs were updated adjusting for price changes over time and for variation in prices of services between states. Changes in the rate of preterm birth, the distribution of preterm birth by gestational age (GA), and the rate of infant mortality by GA at the national and state levels were also incorporated. This cost of preterm birth estimates are the most comprehensive national estimates to date, and provide the first profile of such costs by state for every state and the District of Columbia.

Medicaid expansion is provided as not adopted, adopted and adopted but not implemented. Medicaid expansion has reduced the rates of uninsured. Increased access and utilization of health care are significantly associated with Medicaid expansion.<sup>8</sup>

Maternal and child block grant totals are available from Fiscal Year 2019 for each state. The Maternal and Child Health Services Block Grant, Title V of the Social Security Act, is a federal program devoted to improving the health of all women, children and families. Title V provides funding to state maternal and child health (MCH) programs, which serve 76 million people in the U.S.<sup>9</sup> Maternal and child (MCH) block grants are a key federal source of support for states to improve the health of moms and babies. Other funding sources and strategies are also available to states to make an impact on prematurity.

### CALCULATIONS

All natality calculations were conducted by the March of Dimes Perinatal Data Center. Calculations for the cost of premature birth were conducted by the University of Utah.

### REFERENCES

<sup>1</sup> National Center for Health Statistics, final natality data 2015-2018.

<sup>2</sup> Talih M, Huang DT. Measuring progress toward target attainment and the elimination of health disparities in Healthy People 2020. Healthy People Statistical Notes, no 27. Hyattsville, MD: National Center for Health Statistics. 2016.

<sup>3</sup> IPUMS-USA, University of Minnesota, ipums.org. American Community Survey, US Census Bureau.

<sup>4</sup> PUMS-CPS, University of Minnesota, ipums.org. Current Population Survey, US Census Bureau.

<sup>5</sup> Kotelchuck M. An evaluation of the Kessner Adequacy of Prenatal Care Index and a Proposed Adequacy of Prenatal Care Utilization Index. Am J Public Health 1994; 84: 1414-1420.

<sup>6</sup> Behrman RE, Stith Butler A, eds. Institute of Medicine, Committee on Understanding Preterm Birth and Assuring Healthy Outcomes. Preterm Birth: Causes, Consequences, and Prevention. Washington, DC: The National Academies Press; 2007.

<sup>7</sup> Waitzman NJ and Jalali A. Updating National Preterm Birth Costs to 2016 with Separate Estimates for Individual States. Salt Lake City, UT: University of Utah; 2019.

<sup>8</sup> Kaiser Family Foundation, <https://www.kff.org/health-reform/state-indicator/state-activity-around-expanding-medicare-under-the-affordable-care-act/>. Retrieved on June 30, 2019.

<sup>9</sup> Health Resources and Services Administration. Title V Maternal and Child Block Grant Program. Available at: <https://mchb.hrsa.gov/data-research-epidemiology>. Retrieved on September 12, 2019.